CONTENTS VOLUME 64

Evidence for and implications of self-healing pulses of slip in earthquake rupture
T.H. Heaton (Pasadena, CA, U.S.A.) 1
Magnetic hysteresis as a function of low temperature in rocks: evidence for internal stress control of remanence in multi-domain and pseudo single-domain magnetite
J.P. Hodych (St. John's, Nfld., Canada) 21
Dynamical effects of a hard garnet layer in the transition zone on geophysical signatures: geoid anomalies and postglacial rebound
H.-J. Hong, D.A. Yuen and J. Wu (Minneapolis, Mn, U.S.A.) 37
Estimation of scattering properties of lithosphere of Kamchatka based on Monte-Carlo simulation of record envelope of a near earthquake
I.R. Abubakirov and A.A. Gusev (Kamchatsky, U.S.S.R.) 52
On the vertical gradient and associated heterogeneity in mantle electrical conductivity
A. Schultz (Seattle, WA, U.S.A.) 68
Paleomagnetic tomography of the core-mantle boundary
R.T. Merrill (Seattle, WA, U.S.A.), P.L. McFadden (Canberra, A.C.T., Australia) and M.W. McElhinny (Fishing Points, NSW, Australia) 87

Book Reviews
Solitons: an Introduction by. P.G. Drazin and R.S. Johnson—A.R. Osborne 103
Crystal Chemistry and Refractivity by H.W. Jaffe—D.J. Vaughan 104
Catastrophic Episodes in Earth History by C.C. Albritton Jr.—S.M. Cisowski 105
Tectonics of Suspect Terranes: Mountain Building and Continental Growth by D.G. Howell—M.W. McElhinny 106

Guide for Authors 107

Special Issue: Papers in Palaeomagnetism and Rock Magnetism Collected in Honour of the Late Daniel A. Valencio
Guest Editors: K.M. Creer, J. Urrutia Fucugauchi and J.F.A. Vilas

Contents v
Preface vii

Palaeomagnetic data from Late Glacial glaciolacustrine sediments at Rio Corintos, Chubut, Argentina
L.A. Beraza and J.F.A. Vilas (Buenos Aires, Argentina) 111
Palaeomagnetism of late Cenozoic fossiliferous sediments from Barranca de los Lobos (Buenos Aires Province, Argentina). The magnetic age of the South American land-mammal ages
M.J. Orgeira (Buenos Aires, Argentina) 121
Models of geomagnetic secular variations on recent times for South America
A.M. Sinito (Buenos Aires, Argentina) 133
Paleomagnetism of glacial varves from the last glaciation maximum in Patagonia at Lago Blanco
C.A. Sylwan (Stockholm, Sweden) 143
Palaeomagnetism of the Mesozoic Serra Geral Formation, southern Brazil
M. Ernesto, I.G. Pacca, F.Y. Hiodo (São Paulo, Brazil) and A.J.R. Nardy (Rio Claro, Brazil) 153

Analysis of the paleomagnetism and rock magnetism of the Surco intrusion, Peru: an attempt to obtain a southern hemisphere reversal record
R.J. Weeks, J.R. Dunn, M. Fuller (Santa Barbara, CA, U.S.A.) and L. Quispesivana (Lima, Peru) . 176
Neotectonics in central Mexico
C.A. Johnson and C.G.A. Harrison (Miami, FL, U.S.A.) 187
Palaeomagnetic results from the southern Sierra Madre Oriental, Mexico: evidence for Early Cretaceous or Laramide remagnetization?
H. Böhnel (Münster, F.R.G.), W.A. Gose, M.M. Testarmata (Austin, TX, U.S.A.) and G. Bocanegra Noriega (Mexico D.F., Mexico) 211
Palaeomagnetic data from central Mexico and their use for palaeosecular variation studies
H. Böhnel, J. Urrutia Fucugauchi (Mexico D.F., Mexico) and E. Herrero-Bervera (Honolulu, HI, U.S.A.) 224
Magnetostratigraphy of a Middle Jurassic red bed sequence from southern Mexico
J. Urrutia Fucugauchi, H.N. Böhnel (Mexico D.F., Mexico) and D.A. Valencio (Buenos Aires, Argentina) 237
Palaeomagnetism of ocean layers 2 and 3: evidence from the Metchosin Complex, Vancouver Island
E. Irving and N.W.D. Massey (Sidney, B.C., Canada) 247
On the intensity and stability of the natural remanent magnetization of ocean floor basalts
J. Housden and W. O'Reilly (Newcastle upon Tyne, U.K.) 261
The Indian Ocean MAGSAT anomalies and strong geomagnetic field during Cretaceous 'quiet' zone
P.C. Pal (São Paulo, Brazil) 279
The palaeomagnetic record of the Santiago volcanics (Republic of Cape Verde); multiphase magnetization and age consideration
M.C. Abranches, A. Serralheiro (Lisbon, Portugal), K.M. Storetvedt (Newcastle upon Tyne, U.K.) and R. Løvlie (Bergen, Norway) 290
The palaeomagnetism of the Tumblagooda Sandstone, Western Australia: Gondwana palaeozoic apparent polar wandering
P.W. Schmidt and B.J.J. Embleton (North Ryde, N.S.W., Australia) 303
Climatic and geomagnetic influences on the Lac du Bouchet palaeomagnetic SV record through the last 110 000 years
K.M. Creer, I. Blunk (Edinburgh, U.K.) and N. Thouveny (Marseille, France) 314
Possible high-frequency geomagnetic polarity changes in Lower–Middle Jurassic carbonates in Iraq
B.R. Hijab and D.H. Tarling (Newcastle upon Tyne, U.K.) 342
Mixed domain states of magnetic grains in basalts and implications for palaeomagnetism
C. Radhakrishnamurty (Bombay, India) 348
Magnetic vs. structural fabrics, Whipple detachment structure, Whipple Wash, California
W.D. MacDonald (Binghamton, NY, U.S.A.) and B.B. Ellwood (Arlington, TX, U.S.A.) 355